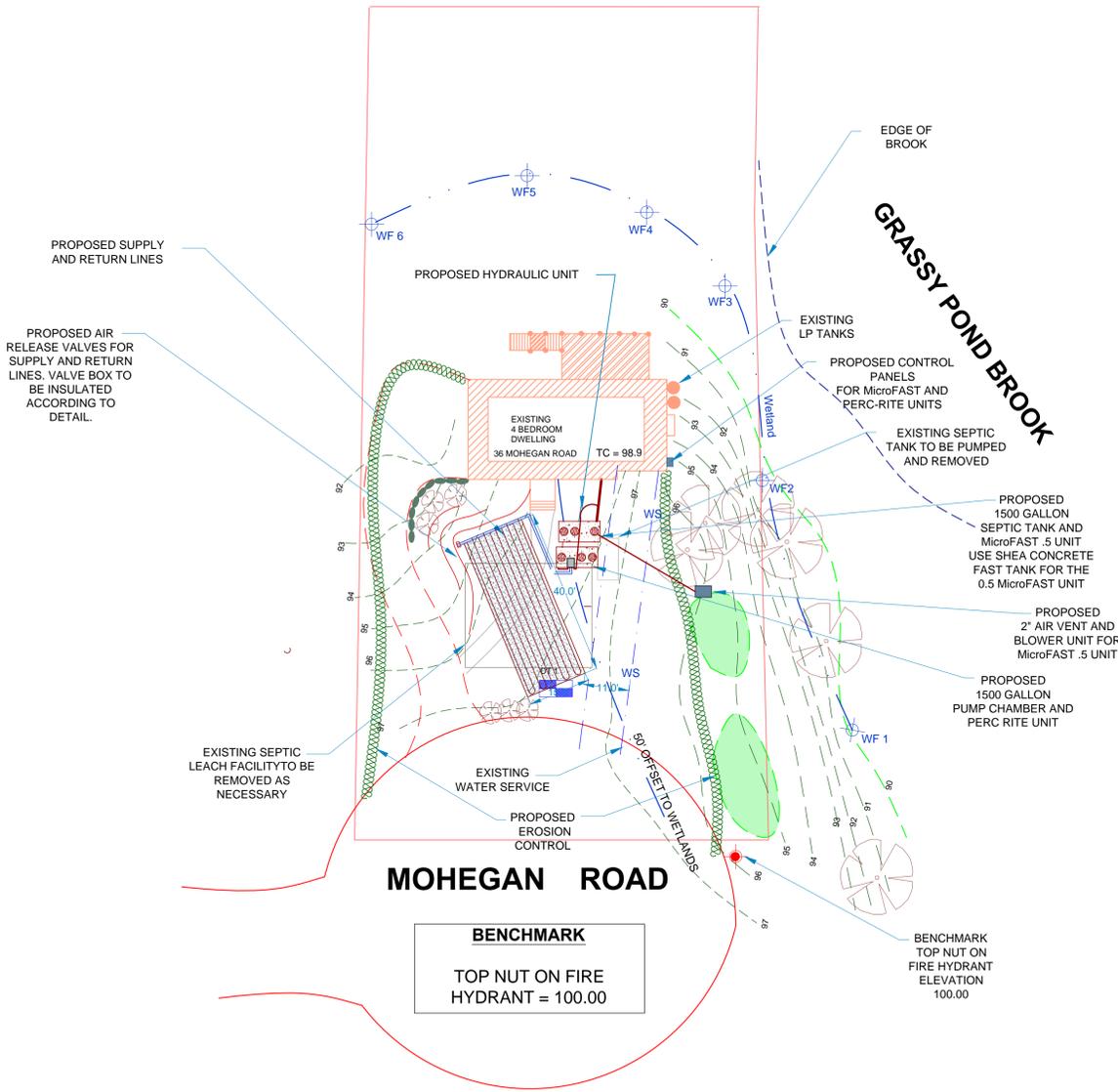


- VARIANCE FROM ACTON REGULATIONS**
- ARTICLE 11-8. ACTON BOH RULES AND REGULATIONS: THE MINIMUM SQUARE FOOTAGE OF A LEACH FIELD SERVING A 4 BEDROOM HOUSE SHALL BE 800 SQ. FT. THE DESIGN PROVIDES 600 SQ. FT.
  - ARTICLE 16. ACTON BOH RULES AND REGULATIONS: OFFSET TO GROUND WATER IN A ZONE 3 AQUIFER PROTECTION ZONE FOR A 2 MPI PERC RATE IS 6 FEET. THE DESIGN PROVIDES 5 FEET.
  - ARTICLE 16-4.3.1. ACTON BOH RULES AND REGULATIONS: THE MINIMUM DISTANCE FROM A WETLAND IN AN AQUIFER PROTECTION ZONE IS 100 FEET. THIS DESIGN PROVIDES FOR A 50' SEPARATION.

**INTERIOR PLUMBING**

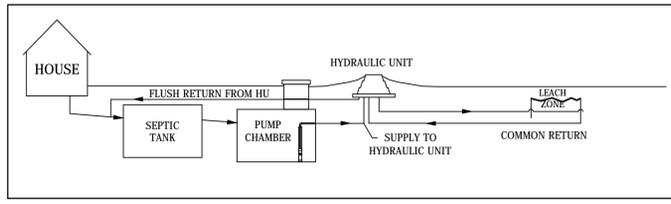
THE INTERIOR PLUMBING WILL NEED TO BE RECONFIGURED TO PROVIDE FOR A DIFFERENCE IN THE FOUNDATION INVERT ELEVATION FROM 94.57 UP TO AN ELEVATION OF 95.40. THE INSTALLER SHALL VERIFY THIS ELEVATION PRIOR TO INSTALLATION OF THE SEPTIC TANK AND COORDINATE THE SEPTIC TANK CHANGE OVER WITH A LICENSED PLUMBER.



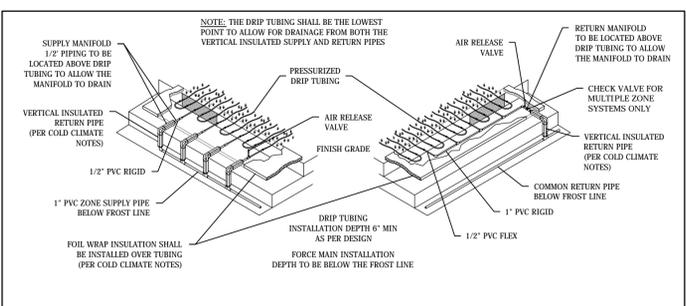
THE EROSION CONTROL BARRIER SHALL BE CONSTRUCTED OF 12" STRAW WADDLES STAKED AT 2' INTERVALS OR ACTON CONSERVATION COMMISSION APPROVED EQUAL.



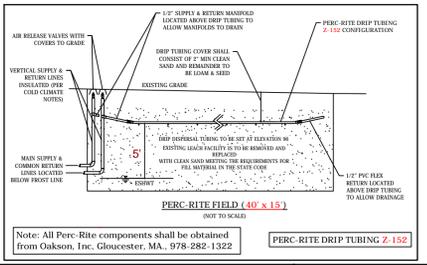
**TYPICAL SYSTEM HYDRAULIC PROFILE (NOT TO SCALE)**



**STANDARD DRIP SYSTEM (SIDE FEED MANIFOLD) (NOT TO SCALE)**



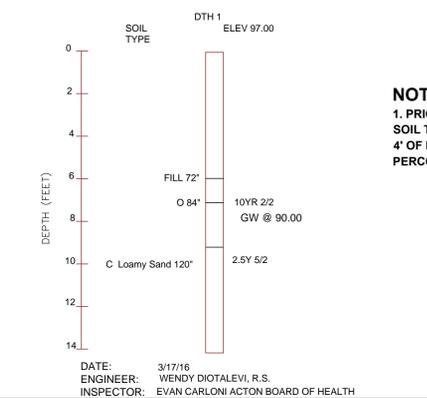
**LEACH FIELD DETAIL**



**SCHEDULE OF ELEVATION**

DESCRIPTION	PROPOSED ELEV.
TOP OF FOUNDATION	98.90
INV OF PIPE AT FOUNDATION	95.40
INV AT SEPTIC TANK IN	94.85
INV AT SEPTIC TANK OUT	94.60
INV AT PUMP CHAMBER IN	94.50
INV AT PUMP CHAMBER OUT	94.50
DRIP LINES	95.00
GROUND WATER	90.00

**DEEP OBSERVATION HOLE LOGS**



**PERCOLATION TEST DATA**

TEST PIT	DATE	DEPTH	ELEVATION	RATE
THE ORIGINAL PERCOLATION RATE OF THIS LOT AND THE SURROUNDING LOTS WAS 2 MPI				

I CERTIFY THAT IN OCTOBER 1994 I PASSED THE EXAMINATION APPROVED BY THE DEP AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME, CONSISTANT WITH THE TRAINING, EXPERTISE, AND EXPERIENCE DESCRIBED IN 310 CMR 15.018.

**DESIGN DATA**

- Estimated Hydraulic Loading: 4 Bedroom Dwelling at 110 gal./day per bedroom = 440 gpd.
- Septic Tank Size: Ave. Daily Flow = 440 gpd x 200% = 880 gal. Septic tank provided 1500 gal. two compartment septic tank.
- Design percolation rate = 2 M.P.I. Loading Rate = 0.74 gal./S.F. 440 G.P.D. / 0.74 gal./S.F. = 595 S.F.
- Leaching Area: 15 x 40 ft. long = 600 S.F. 600 S.F. x 0.74 gal./S.F. = 444 G.P.D.
- Max. allowable loading (under Title 5) = 440 G.P.D. A GARBAGE DISPOSAL IS NOT ALLOWED WITH THIS DESIGN.
- Provide 400 LF of Pipe in 40' lengths for 10 lengths placing the 40' lengths .75' from each outside edge, then 1.5' OC

**LEGEND**

- FG-XX.X = Proposed Contour
- XX.X = Existing Contour
- XX.X = Existing Spot Elev
- CB = Catch Basin
- PVC = SCH 40 polyvinyl chloride Pipe
- W = Water Service
- OHW = Overhead Wire
- D = Storm Drain
- G = Gas Service
- C = Cable/Telephone service

**CONSTRUCTION NOTES**

- REGULATIONS**
  - This design is in accordance with the Commonwealth of Massachusetts regulations 310 CMR 15.000 Title 5, of the State Environmental Code and the requirements of the local Board of Health.
  - All work shall conform to the latest edition of the Commonwealth of Massachusetts regulations, 310 CMR 15.000 Title 5 of the State Environmental Code which governs the design and construction of onsite disposal of sanitary sewage.
  - This plan must be reviewed and permitted by the local Board of Health prior to construction.
  - All work shall be in accordance with the regulations of the local Board of Health, and must be inspected and approved by the local Board of Health.
  - All construction activity within 100 feet of a wetlands or resource area requires filing in accordance with the wetlands Protection Act, MGL Chapter 131 Section 40.
  - The contractor shall have a valid installer's license, issued by the local Board of Health, and be approved by the manufactures of both the MicroFast and Perc Rite Units to install this septic systems.
- MATERIALS & CONSTRUCTION**
  - All concrete products shall meet the requirements of 310 CMR 15.226(2) and 15.226(3). The septic tank shall bear the manufacturer's quality control/quality assurance seal stating conformance with ASTM Standard C 1227-93.
  - Septic tanks shall have three 20" openings brought to grade. All tanks shall be set on a level compacted base of 6" of crushed 3/4" - 1 1/2" stone.
  - Piping and joints outside the soil absorption system (SAS) must be watertight SCH 40 PVC piping (ASTM D2665) or equivalent.
  - Fill material for systems constructed in fill shall be clean granular sand, free of organic matter and deleterious substances, meeting the requirements of 310 CMR 15.255(3).
  - All system components shall be marked with magnetic marking tape or a comparable means in order to locate them once buried. F. No testing to determine the presence of and depth to ledge has been made on this lot except at the location of the test holes.
- CHANGES**
  - No variation from this plan shall be made without written direction from the Engineer.
  - All system elevations and locations are based on the proposed site grading plan and the first floor elevation of the structure. Changes to the horizontal or vertical location of any structure, SAS component, driveway or grading must be approved by the Design Engineer.
  - The Contractor shall notify the Engineer of any discrepancies between the site plan and actual site conditions, should they exist, before installation of the system.
- EXCAVATION**
  - The Contractor must verify the location of all underground utilities prior to construction of this system.
  - In accordance with 310 CMR 15.246
    - Excavation for construction of the SAS may be by mechanical means, provided care is taken to assure that the soil at the bottom of the excavation is not compacted or smeared.
    - The bottom and sides of the excavation shall be level and scarified.
    - Vehicular traffic and parking of vehicles or equipment in or on the area of the SAS should be avoided at all times before, during and after construction of the SAS.
    - From the date of installation of the SAS until receipt of a Certificate of Compliance from the approving authority, the perimeter of the SAS shall be staked and flagged to prevent the use of such area for all activities which might damage the SAS. Such flagging is not intended to preclude the final grading and landscaping of the area of the SAS.
    - Stockpiling of materials or equipment within the SAS is prohibited.
  - In accordance with 310 CMR 15.255(6)
    - Care must be taken to protect the excavation from damage during construction caused by rain, snow or freezing.
    - The excavation must be scarified and relatively dry prior to the placement of fill.
    - Fill must be stockpiled at the edge of the excavation and placed in 6 inch lifts within the SAS.
    - Fill shall not be placed during rain or snow storms.
    - The excavation shall be dewatered as necessary if it is within the water table.
  - All unsuitable materials defined in the soil logs as horizons O or other impervious or other suitable material uncovered in the excavation shall be removed and replaced with clean granular sand as defined in 310 CMR 15.255(3).
- BACKFILLING**
  - All fill shall be stockpiled along the edge of the SAS excavation and cast or pushed into the excavation. Dumping of fill from a trailer or dump truck directly into the excavation is not permitted.
  - Fill material shall be mounded above natural grade to allow for settling and to channel runoff away from the SAS.
  - No component of the septic system shall be backfilled or otherwise concealed prior to inspection and approval of installation by the Engineer and the local Board of Health.
- LOAM AND SEED**
  - A minimum loam cover of 4" shall be spread to the finished grade shown on the plans.
  - Seeding shall be done following spreading, raking and rolling of loam.
  - Erosion control shall be provided by placement of straw or hay.
- GENERAL NOTES**
  - All wells, wetlands and water courses within 150 feet of the septic system are shown on this plan.
  - The property line information were taken from the original septic plan.
  - Changes which alter the sewage disposal system/building relationship, require that the Engineer be notified of revisions to this design. Conformance with zoning by-laws shall be the responsibility of the owner.
  - The occupancy requirements (number of bedrooms, etc.) for the existing building(s) as indicated in the calculations below and as shown herein are based on owner supplied information. No certification is made regarding this information.
- CERTIFICATE OF COMPLIANCE**
  - The Contractor shall notify the Engineer and the local Board of Health 48 hours before beginning the installation of this septic system to coordinate the following required inspections:
    - At completion of the excavation of the SAS prior to placement of fill. If fill is required, a representative sample of the fill should be on site for this inspection. See note #4 EXCAVATION.
    - At completion of the SAS construction, all lines must be backfilled to the crown of the pipe, all covers must be loose with heavy covers propped up on 2x4 boards for ease of inspection and a 5 gallon container of water must be placed next to the distribution box that has already been filled to the outlet elevation with clear water.
    - After backfilling, and before loam is in place all covers to the septic tank should be exposed to verify that the maximum cover of 6" will not be exceeded.
  - Upon completion of the septic system, the Engineer shall prepare an as-built plan showing changes (if any) to the original design plan. The Engineer and Contractor shall certify in writing that the system has been installed in accordance with the original design plan, 310 CMR 15.000, Title 5 of the state environmental code, and the local Board of Health regulations and that any changes to the original design plan are reflected on the as-built as required by 310 CMR 15.021(3).
- MAINTENANCE**
  - The septic tank and tees must be inspected and repaired annually and if the solids exceed 1 foot depth, the tank should be pumped.
  - The MicroFast and Perc Rite units must be inspected annually.
- NITROGEN SENSITIVE AREA**

This project lies within a nitrogen sensitive area.

**APPLICANT**  
**GEORGE PROCTER**  
**36 MOHEGAN ROAD**  
**ACTON, MA 01720**

**PROPOSED SEWAGE DISPOSAL SYSTEM**  
**36 MOHEGAN ROAD**  
**ACTON, MA**



**D.C. & Daughters**  
**3 Kellert Drive**  
**Milford, MA 01757**  
**(508) 478-0242**

**PAGE 1 OF 2**  
 DESIGNED BY: WD  
 DRAFTED BY: WD  
 CHECKED BY: CC  
 SCALE: 1" = 20'  
 DESIGN DATE: 3/30/16  
 REVISION DATE: 4/6/16 BOH  
 REVISION DATE: 4/11/16  
 PERC-RITE DRIP IRRIGATION  
 REVISION DATE: 4/14/16  
 MicroFAST 0.5